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(54) Title: NOVEL BACILLUS BAGCEL CELLULASE

ORF Nucleotide sequence of cellulase gene

ATGGGTTATA	CCAAAGCGAA	GTGTACGTTG	AAAAAACTG	TCITGTTTGG	50
TTTAATTCTC	TGTTTAAGTG	TGTCAATGTT	TGTTCCAATG	ACATCAGCTG	100
AAGATGTCAC	TTCGTCACAG	TTGGATATTC	ACTCCTATGT	AGCTGACATG	150
CAGCCTGGCT	GGAAATTTAGG	AAATACGTTT	GACGCTGTTG	GAGATGATGA	200
AACAGCGTGG	GGGAATCCTC	GTGTAACAAG	AGAGTTAATA	AAAACGATTG	250
CTGATGAAGG	GTATAAAAGC	ATTCGTATCC	CAGTGACATG	GCAAAATCAA	300
ATGGGTGGTT	CTCCAGATTA	TACGATAAAT	GAAGATTATA	TCAATCGGGT	350
GGAGCAAGCG	ATAGATTGGG	CGTTGGAGGA	AGACTTATAT	GTGATGTTAA	400
ATGTGCATCA	TGACTCATGG	CTGTGGATGT	ATGATATGGA	ACATAACTAT	450
GATGAGGTCA	TGGCAAGATA	TACAGCTATT	TGGGAACAAT	TGTCGGAATA	500
ATTCAAAAGC	CACCTCCATA	AGTTGATGTT	TGAGAGTGTC	AATGAGCCTA	550
GGTTTACGCA	GGAGTGCGGA	GAGATTCAAG	AAAATCATCA	TGCTTACTTA	600
GAAGATTTAA	ATAAGACGTT	CTATTATATT	GTCAGAGAGT	CAGGAGGCAA	650
TAATGTGGAG	CGCCCTTTAG	TATTGCTTAC	GATAGAAACA	GCCACGTCTC	700
AGGATTTACT	AGATCGCTTG	TATCAAACAA	TGGAAGACTT	GGATGATCCT	750
TATTTAATTG	CCACGGTGCA	TTATTATGGC	TTCTGGCCAT	TTAGTGTCAA	800
TATAGCAGGG	TACACTCAT	TTGAACAGGA	AACACAACAA	GATATTATAG	850
ACACCTTTGA	CCGTGTTTCA	AACACATTTA	CAGCGCGTGG	TGTCACGATT	900
GTATTAGCGG	AATTGCGTTT	GTTAGGCTTT	GACAAAAGTA	CGGATGTGAT	950
TCAGCAAGGG	GAGAAATTAA	AGTTTTTTGA	GTCTCTCATC	CATCATCTCA	1000
ATGAACGTGA	TATAACCCAT	ATGTTATGGG	ATAACGGCCA	GCATTTAAT	1050
CGAGAAACTT	ATGCATGGTA	TGATCAAGAA	TTTCATGACA	TATTAAAGC	1100
GAGTTGGGAG	GGGCGTTCTG	CTACAGCAGA	GTCTAATTTG	ATTCATGTGA	1150
AGGACGGAAA	GCCAATTAGA	GATCAAGATA	TACAGCTTTA	CTTAAACGGA	1200
AATGAGCTAA	CAGCCTTACA	GGCAGGGGAG	GAATCGCTTG	TTCTAGGAGA	1250
GGATTATGAA	CTAGCAGGAG	GCGTATTAA	GCTAAAAGCG	GACACCTTCA	1300
CAAGACTAAT	TACCCTTGGT	CAATTAGGAA	CCAATGCAGT	CATCACAGCA	1350
CAATTTAATT	CTGGAGCAGA	CTGGCGTTT	CAATTACAGA	ATGTGGACGT	1400
GCCAACGGTC	GAATAACAG	ATGGCTCAAC	ATGGCATT	GCGATCCCTA	1450
CCCATTTTAA	TGGTGATAGT	CTTGCGACGA	TGGAAGCTGT	TTATGCAAA	1500
GGAGAAATATG	CTGGGCGCGA	AGATTGGACG	TCATTTAAAG	AATTTGGCGA	1550
GGCGTTTTCT	CCTAATTACG	CCACAGGGGA	AATTATTATA	TCAGAAGCCT	1600
TCTTTAACGC	GGTACGGGAT	GATGATATCC	ATTAAACATT	TCATTTTGG	1650
AGCGGACAGA	CGGTGGAATA	TACCTTACGT	AAAAATGGCA	ATTATGTTCA	1700
AGGTAGACGG	TAA				1713

(57) Abstract: The present invention provides a novel cellulase nucleic acid sequence, designated BagCel, and the corresponding BagCel amino acid sequence. The invention also provides expression vectors and host cells comprising a nucleic acid sequence encoding BagCel, recombinant BagCel proteins and methods for producing the same.

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